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This index covers all technical items - papers, correspondence, reviews, etc. - that appeared in this periodical during 1995, and items from previous years that were commented upon or corrected in 1995.

The Author Index contains the primary entry for each item, listed under the first author's name, and cross-references from all coauthors. The Subject Index contains several entries for each item under appropriate subject headings, and subject cross-references.

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Estimation; cf. Adaptive estimation; Delay estimation; Direction of arrival estimation; Filtering; Maximum entropy methods; Maximum likelihood estimation; Mean square error methods; Nonlinear estimation; Parameter estimation; Sequential estimation; State estimation

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Failure analysis; cf. Fault diagnosis; Reliability

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Filtering; cf. Kalman filtering

Filters; cf. Adaptive filters; Discrete time filters; Filtering; Matched filters; Nonlinear filters; Tracking filters

Finite duration impulse response digital filters; cf. FIR digital filters

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Flight control; cf. Aircraft control; Space vehicle control

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Frequency domain analysis; cf. Discrete Fourier transforms; Fourier transforms

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Imaging/mapping; cf. Radar imaging/mapping; Synthetic aperture imaging

Impedance matching

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Impulse radar; cf. Monopulse radar

Inertial navigation

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Interferometry; cf. Radio interferometry

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Landing guidance systems; cf. Aircraft landing guidance

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Learning systems; cf. Backpropagation**Least mean square methods**

- adaptive algm., SS syst. interf. suppression. *Kalidas, P.*, +, *T-AES Jul 95 1198-1201*
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- corrections to "Use of idempotent matrices to validate linear systems software" (Nov 90 935-952). *Kerr, T.H.*, *T-AES Apr 95 862-863*
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- correl. K-distributed clutter generation, radar detect./tracking. *Marier, L.J., Jr.*, *T-AES Apr 95 568-580*

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- losses in PF correction cts., computer simul. *Stuart, T.A.*, +, *T-AES Jul 95 1167-1173*

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- pass. ranging, image expansion. *Barniv, Y.*, *T-AES Jan 95 358-374*

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- Doppler filter perform., clutter-to-noise ratio effect. *Steiner, M.*, +, *T-AES Jul 95 1177-1186*
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 Doppler filter perform., clutter-to-noise ratio effect. *Steiner, M.*, +, *T-AES Jul 95 1177-1186*

Matching; cf. Impedance matching**Mathematics; cf. Numerical analysis; Optimization methods****Matrices**

- CFAR detect. in clutter, unknown correl. props. *Raghavan, R.S.*, +, *T-AES Apr 95 647-657*
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Matrices; cf. Covariance matrices; Matrix inversion; Rational matrices**Matrix decomposition/factorization; cf. Singular value decomposition****Matrix inversion**

- real-symmetric adaptive array perform. improvement, sig. blocking. *Lo, K.W.*, *T-AES Apr 95 821-830*

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- radar resoln. enhancement, Burg algm. *Pei-Rin Wu*, +, *T-AES Jul 95 897-915*

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- optimal CFAR detect. in Weibull clutter. *Anastassopoulos, V.*, +, *T-AES Jan 95 52-64*
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- ballistic missile track initiation from satellite obs. *Yeddanapudi, M.*, +, *T-AES Jul 95 1054-1071*
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Mean square error methods

- forward-backward lin. predictor, DOA estim., Kalman-based. *Yuan-Hwang Chen*, +, *T-AES Jan 95 474-479*

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- pulse radar detect. perform. improvement, neural networks. *Rao, K.D.*, +, *T-AES Jul 95 1193-1198*

Microprocessor applications

- pulse radar detect. perform. improvement, neural networks. *Rao, K.D.*, *T-AES Jul 95 1193-1198*

- radar tracking EKF on transputer networks. *Deergha Rao, K.*, +, *T-AES Apr 95 857-862*

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- radar tracking EKF on transputer networks. *Deergha Rao, K.*, +, *T-AES Apr 95 857-862*

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- smart antenna neurocontrol. *Thurshy, M.*, +, *T-AES Oct 95 1341-1347*

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- multiband commun. satellite antenna syst., design and charact. *Ueno, K.*, +, *T-AES Apr 95 600-607*

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- HAL-3 radar test set, comments. *Johnston, S.L.*, *T-AES Apr 95 854*

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- digital microwave receiver, lin. amp./ADC anal./design. *Sharpin, D.L.*, *T-AES Jan 95 248-256*

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- buck/boost servoamplifier, airborne direct-drive-valve actuation. *Jea-Seon Lin*, +, *T-AES Jul 95 960-967*
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Military data processing

- ballistic missile track initiation from satellite obs. *Yeddanapudi, M.*, +, *T-AES Jul 95 1054-1071*

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- multiple model adaptive estimator target tracker, accel. models. *Wheaton, B.J.*, +, *T-AES Jan 95 151-167*

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- high resoln. MMW diagnostic imaging radar. *Fan, Z.F.*, +, *T-AES Oct 95 1348-1353*

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- homing missiles, generalized guidance laws anal. *Vathsal, S.*, +, *T-AES Apr 95 514-521*

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- 3D min. energy guidance. *Guelman, M.*, +, *T-AES Apr 95 835-841*
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- 3D min. energy guidance. *Guelman, M.*, +, *T-AES Apr 95 835-841*
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 LOS for homing guidance, improved command. *Gyu Taek Lee*, +, *T-AES Jan 95 506-510*
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Missile tracking; cf. Missile detection and tracking**Mobile communication**

- odd-perfect, almost binary correl. seqs. *Luke, H.D.*, +, *T-AES Jan 95 495-498*

Mobile communication; cf. Land mobile radio**Modeling; cf. Circuit modeling; Hidden Markov models****Modulation/demodulation**

- ranging in radar/sonar systs., phase demodulation. *Leitao, J.M.N.*, +, *T-AES Apr 95 581-599*

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- model-based multifrequency array sig. proc. *Bosse, E.*, +, *T-AES Jan 95 194-210*

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- adaptive array CFAR detect. *Kalson, S.Z.*, *T-AES Apr 95 534-542*
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Motion measurement; cf. Tracking

Moving average processes; cf. Autoregressive moving average processes

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Multidimensional signal processing; cf. Image processing; Multidimen-
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Navigation; cf. Global Positioning System; Inertial navigation; Radar
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Neural networks; cf. Feedforward neural networks

Neurocontrollers

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Nonlinear differential equations

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Nonlinear distortion; cf. Intermodulation distortion

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 Gradient methods; Minimization methods

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- systolic robust adaptive beamforming, adjustable constraint. *Vanpoucke, F.*, +, *T-AES Apr 95* 658-669

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Parallel processing; cf. Multiprocessing; Pipeline processing**Parallel programming; cf. Parallel algorithms****Parameter estimation**

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- range estim. of moving source, wavefront curvature methods. *Le Cadre, J.-P.*, *T-AES Jul 95* 1082-1103
- rate-aided multisignal time delay detect./tracking. *Bethel, R.E.*, +, *T-AES Jul 95* 1019-1042
- variable-dimens. filter, input estim. *Yong Hwan Park*, +, *T-AES Jan 95* 399-408

Parameter estimation; cf. Direction of arrival estimation; Frequency estimation**Partial differential equations**

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- HMMs, spatio-temporal pattern recogn. *Fielding, K.H.*, +, *T-AES Oct 95* 1292-1300
- star-config. searching for satellite attitude computation. *Baldini, D.*, +, *T-AES Apr 95* 768-777

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- CW radar, wt. effects on periodic ambiguity fn. *Getz, B.*, +, *T-AES Jan 95* 182-193

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- CW radar, wt. effects on periodic ambiguity fn. *Getz, B.*, +, *T-AES Jan 95* 182-193
- polyphase codes/optimal filters, multiple user ranging. *Griep, K.R.*, +, *T-AES Apr 95* 752-767

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- airborne adaptive radar, diffuse jammer multipath cancellation. *Fante, R.L.*, +, *T-AES Apr 95* 805-820
- multihypothesis tracking, electronically scanned radar. *van Keuk, G.*, *T-AES Jul 95* 916-927

Phased arrays; cf. Adaptive arrays**Phase detection**

- cycle slip perform. of digitally implemented phase detectors. *Hasan, P.*, *T-AES Jul 95* 1105-1110

Phase distortion; cf. Delay effects**Phase locked loops**

- controlled-root formulation for digital PLL. *Stephens, S.A.*, +, *T-AES Jan 95* 78-95
- cycle slip perform. of digitally implemented phase detectors. *Hasan, P.*, *T-AES Jul 95* 1105-1110

Phase-shift keying; cf. Quadrature phase shift keying**Phase synchronization; cf. Phase locked loops****Picture processing; cf. Image processing****Pipeline processing**

- radar tracking EKF on transputer networks. *Deergha Rao, K.*, +, *T-AES Apr 95* 857-862

Pipeline processing; cf. Systolic arrays**PLL; cf. Phase locked loops****Polarization**

- adaptive estim. of sig. polariz. *Raghavan, R.S.*, +, *T-AES Apr 95* 845-852

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- aircraft control systs. design, robustly stable. *Pujara, L.R.*, *T-AES Jan 95* 479-486

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- aircraft control systs. design, robustly stable. *Pujara, L.R.*, *T-AES Jan 95* 479-486
- multitarget tracking and motion correspondence, ranked assignments. *Cox, I.J.*, +, *T-AES Jan 95* 486-489

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- seq. design for IIR inverse filter pulse compression. *Wei-Chun Wang*, +, *T-AES Apr 95* 670-684

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- geostationary satellites based commun./posn. determ. *Morikawa, E.*, +, *T-AES Apr 95* 784-794
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- perforated-plate mag. based inductor/transformer. *Osegueda, E.*, +, *T-AES Jul 95* 968-976

Power conversion; cf. DC-DC power conversion; Pulse width modulated power converters; Resonant power conversion**Power electronics**

- functional models for space power electronic ccts. *Kwa-Sur Tam*, +, *T-AES Jan 95* 288-296

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- fixed freq. LCL series reson. converter. *Bhat, A.K.S.*, *T-AES Jan 95* 125-137

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- soft switching IGBT converters, vol. vs freq. *Masserant, B.J.*, +, *T-AES Jan 95* 280-287

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- perforated-plate mag. based inductor/transformer, Mode-2. *Kirli, S.*, +, *T-AES Jul 95* 977-986

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- time-of-arrival prediction model for transionospheric EMP. *Kim, Y.S.*, +, *T-AES Jan 95* 409-413

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- adaptive estim. of sig. polariz. *Raghavan, R.S.*, +, *T-AES Apr 95* 845-852
- aircraft guidance/decision aid for wind shear avoidance. *Stratton, D.A.*, +, *T-AES Jan 95* 117-124
- binary adaptive detectors, convergence perform. *Gerlach, K.*, +, *T-AES Jan 95* 329-340
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- CFAR detectors, lin. combined order stat., perform. anal. *Nagle, D.T.*, +, *T-AES Apr 95* 522-533
- data assoc. in multitarget tracking, efficient algm. *Zhou, B.*, +, *T-AES Jan 95* 458-468
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- distributed detect., gradient algm. for quantization levels. *Helstrom, C.W.*, *T-AES Jan 95* 390-398
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- optimal m-ary data fusion, distributed sens. *Baek, W.*, +, *T-AES Jul 95* 1150-1152
- radar detect. probabilities and their calc. *Shnidman, D.A.*, *T-AES Jul 95* 928-950
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- renewal models for maneuvering targets. *Sworder, D.D.*, +, *T-AES Jan 95* 138-150
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Probability; cf. Gamma distributions; Lognormal distributions; Monte Carlo methods; Rayleigh distributions; Weibull distributions**Proportional control**

- 3D min. energy guidance. *Guelman, M.*, +, *T-AES Apr 95* 835-841
- generalized proportional navig., maneuvering/nonmaneuvering targets. *Pin-Jar Yuan*, +, *T-AES Jan 95* 469-474

Protection/safety

- aircraft guidance/decision aid for wind shear avoidance. *Stratton, D.A.*, +, *T-AES Jan 95* 117-124

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- seq. design for IIR inverse filter pulse compression. *Wei-Chun Wang*, +, *T-AES Apr 95* 670-684

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- adaptive canceller and pulse compression interacts. *Gerlach, K.*, *T-AES Jan 95* 310-319

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ECCM develop., anti-stealth and anti-ARM. Li Neng-Jing, +, *T-AES Jul 95 1120-1127*

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CFAR detect. in clutter, unknown correl. props. Raghavan, R.S., +, *T-AES Apr 95 647-657*

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- Three-dimensional vision**; cf. Stereo vision
- Time delay**; cf. Delay effects
- Time difference of arrival estimation**; cf. Delay estimation
- Time division multiplexing**
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- Time domain analysis**
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- Time of arrival estimation**; cf. Delay estimation
- Time-varying systems**
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- Topology**; cf. Circuit topology
- Tracking**
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- Tracking filters**
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- variable-dimens. filter, input estim. *Yong Hwan Park*, +, *T-AES Jan 95* 399-408
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- Traffic control**; cf. Air traffic control
- Transducers**; cf. Multisensor systems
- Transfer functions**
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- Transforms**; cf. Fourier transforms; Hough transforms; Laplace transforms; Z transforms
- TV broadcasting**
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- U**
- Uncertain systems**
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- Underwater object detection**; cf. Sonar detection
- V**
- Vectors**
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- VHF antennas**
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- VHF measurements**
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- Voltage control**
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- W**
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- Zeros**; cf. Poles and zeros
- Z transforms**
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